

## CLAIMS

What is claimed is:

1. A method of determining the inflow profile of an injection wellbore, comprising:  
stopping injection of fluid into a formation, the formation intersected by a wellbore  
having a section uphole of the formation and a section within the formation;  
monitoring temperature at least partially along the uphole section of the wellbore and at  
least partially along the formation section of the wellbore;  
injecting fluid into the formation once the temperature in the uphole section of the  
wellbore increases; and  
monitoring the movement of the increased temperature fluid as it moves from the uphole  
section of the wellbore along the formation section of the wellbore.
2. The method of claim 1, wherein the temperature monitoring is performed by a distributed  
temperature sensing system.
3. The method of claim 1, further comprising computing the velocity of the increased  
temperature fluid in the formation section of the wellbore.
4. The method of claim 3, further comprising plotting the velocity of the increased  
temperature fluid as a function of depth in the formation section of the wellbore.

5. The method of claim 3, wherein the inflow profile indicates the percentage of fluid injected along the length of the formation section of the wellbore.
6. The method of claim 3, further comprising:  
measuring the injection rate of fluid at the surface; and  
calculating the inflow profile in quantitative form.